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Study of the rheological properties of clays using the problem on shrinkage of a clay layer as an example

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Abstract

The rheological properties of water-saturated clays have been studied based on the model described in [1, 2], The problem on shrinkage of a clay layer under strain has been reduced to the well-known problem of N. N. Verigin. The numerical solution of the problem on squeezing of water from a clay layer has been found and analyzed. The distinctive features of the model, which are important for explanation of certain characteristic features of the rheology of clays, have been investigated. It has been shown that the solutions obtained are in qualitative agreement with experimental results. © 2006 Springer Science+Business Media, Inc.

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